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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,079	01/12/2005	Tomohiro Ooba	TIP-04-1325	4423

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IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP
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EXAMINER

COSTALES, SHRUTI S

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/521,079

Applicant(s)

OOBA ET AL.

Examiner

Shruti S. Costales

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/12/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. It is to be noted that the applicant failed to provide copies of the foreign references cited on the information disclosure statement submitted by the applicant on January 12, 2005. According to 37 C.F.R. § 1.98 a copy of each foreign reference cited on the information disclosure statement must be supplied by the applicant for the Examiner's consideration. Although said information disclosure statement was not filed in compliance with the provisions of 37 CFR § 1.98, the Examiner has nevertheless considered the information disclosure statement.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 602. More particularly, the title provided on the oath or declaration is "CURABLE COMPOSITION" which is not the same as the title of the specification filed by the applicant "CURING COMPOSITION".

Specification

3. The abstract of the disclosure is objected to because the abstract is set forth in more than one paragraph. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "A curing composition including a polymer having two or more thiol groups per molecule, a compound having two or more isocyanate groups per molecule, carbon black, and a silicic acid or silicate filler".

Claim Objections

5. Claim 1 is objected to because the "and" appearing before "carbon black" at line 3 of claim 1 appears to be improper because the carbon black is not the last component present in claim 1. It is suggested that the "and" appearing before "carbon black" be deleted as the last required component present in claim is the filler.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, claims 1-3, 6, and 7 recite the limitation "main ingredient", wherein it is not clear to one of ordinary skill in the art what is meant by said limitation and exactly what amount (defined by one of wt%, vol%, parts by weight, etc.) will meet the criteria of "main ingredient". Claims 4, 5, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being dependent from a rejected base claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claims 1, 3-6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication Number 2000-281894 to Toray Thiokol Co Ltd in view of Mahdi et al. (U.S. Patent Number 6,355,127).

Toray discloses a curable composition including a polymer having two or more thiol groups in the molecule, a polyisocyanate compound having two or more isocyanate groups in the molecule as a curing agent, and an inorganic material present in an amount of 0.5 to 50 parts by weight per 100 parts by weight of the polymer (Abstract). The mole ratio of the isocyanate radical / thiol group is between 0.5 – 4.0 (Paragraph [0027]). An organometallic compound is further disclosed (Paragraph [0038]). Toray also discloses perlite as a filler (Paragraph [0030]).

The difference between Toray and the presently claimed invention is the requirement of the various fillers and plasticizer in specified amounts.

Mahdi, which is drawn to an adhesive composition having a curing agent (Col. 2, lines 14-30) and the composition may be used as a sealant (Col. 26, line 45), discloses curing agents useful in preparing prepolymers of polyurethane (Col. 10, lines 35-42; see also Col. 9, lines 1-12). Mahdi also discloses organo metallic catalysts that promote curing of polyurethane prepolymers (Col. 10, lines 43-64). It is also disclosed that reinforcing fillers such as carbon black may be added to the composition in an amount of from 1 to 40 parts by weight relative to the total weight of the adhesive composition (Col. 20, lines 17-36). Clays including various silicates may also be added to the adhesive composition in an amount of from 0 to 20 parts by weight relative to the adhesive composition (Col. 20, lines 37-50). Plasticizers may also be added to the

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adhesive composition in an amount of 0 to 45 parts by weight relative to the total weight of the adhesive composition, wherein some of the disclosed plasticizers are hydrocarbons, e.g., terpene (Col. 20, lines 51-67 and Col. 21, lines 1-14). Further, perlite may be added to the adhesive composition in an amount of from 0 to 10 parts by weight relative to the total weight of the adhesive compositions (Col. 21, lines 30-43). It is to be noted that the amounts of the various fillers and the plasticizer are disclosed relative to the total weight of the adhesive composition, however, the disclosed ranges are large enough to at least partially correspond to the amounts presently recited. It would have been obvious to one of ordinary skill in the art to add Mahdi's various fillers and plasticizer to Toray's curing composition because the carbon black provides a desired black color along with providing an increase in strength and thixotropic properties of the curing composition (Col. 20, lines 21-29), the perlite acts as a thixotrope (Col. 21, lines 30-34) providing a desired consistency to the curing composition, and the plasticizer provides desired rheological properties to the curing composition (Col. 21, lines 1-3), thereby obtaining the invention as set forth in the presently cited claims.

10. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication Number 2000-281894 to Toray Thiokol Co Ltd in view of Apotheker et al. (U.S. Patent Number 4,214,060).

Toray discloses a curable composition including a polymer having two or more thiol groups in the molecule, a polyisocyanate compound having two or more isocyanate

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groups in the molecule as a curing agent, and an inorganic material present in an amount of 0.5 to 50 parts by weight per 100 parts by weight of the polymer (Abstract). The mole ratio of the isocyanate radical / thiol group is between 0.5 – 4.0 (Paragraph [0027]). An organometallic compound is further disclosed (Paragraph [0038]). Toray also discloses perlite as a filler (Paragraph [0030]).

The difference between Toray and the presently claimed invention is the requirement of the pulverized coal as a filler in a specified amount.

Apotheker, which is drawn to the manufacture of cured articles (Col. 1, lines 11-13) useful as gaskets etc. (Col. 5, lines 59-68), discloses adding pulverized bituminous coal in an amount of 10 parts by weight relative to 100 parts by weight of a copolymer (Col. 10, lines 45-54 and Col. 16, lines 26-35). It would have been obvious to one of ordinary skill in the art to add Apotheker's pulverized bituminous coal to Toray's curing composition because the resulting composition exhibits high tensile strength and elasticity (Col. 19, lines 18-23) that are desirable properties in curing compositions useful as sealants, thereby obtaining the invention as set forth in the presently cited claims.

Conclusion

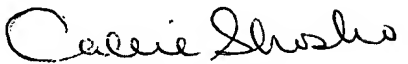
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

SSC
Shruti S. Costales
September 16, 2005


CALLIE E. SHOSHO
PRIMARY EXAMINER